PATENT ABSTRACTS OF JAPAN

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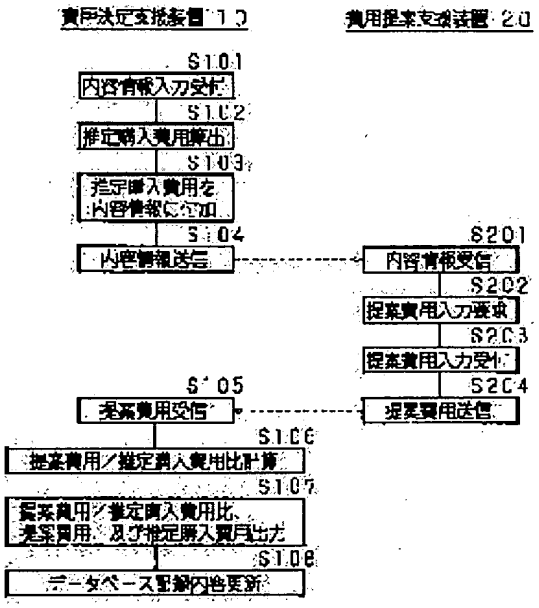
(54) SYSTEM AND DEVICE FOR SUPPORTING COST DETERMINATION AND RECORDING MEDIUM

(57)Abstract:
PROBLEM TO BE SOLVED: To provide a system and a device for supporting cost determination and a recording medium, with which efficiency in the exchange of various materials is improved, the time therefor is shortened and further, the objective assessment on the side of an ordering enterprise for the purchase cost of a product proposed by an order receiving enterprise is supported between the ordering enterprise for ordering the product and the order receiving enterprise for receiving the order.
SOLUTION: A cost determination supporting device 10 accepts the input of contents information (S101), calculates the estimated purchase cost on the basis of the accepted contents information (S102) and transmits the contents information to a cost proposal supporting device 20 (S104). The cost proposal supporting device 20 requests the input of the proposed cost based on the received contents information (S202) and transmits the accepted proposed cost to the cost determination supporting device 10 (S204). The cost determination supporting device 10 calculates the received proposed cost for comparison with the estimated purchase cost (S106).



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[Date of extinction of right]
* NOTICES *

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CLAIMS

[Claim(s)]
[Claim 1] In the costs decision support system equipped with the costs decision exchange equipment (10) which supports the decision of the purchase costs of a manufacture, and the costs proposal exchange equipment (20) which supports the proposal of the purchase costs of the manufacture which has decision supported with this costs decision exchange equipment (10) database (101) which records the calculation information which uses said costs decision exchange equipment (10) for calculation of purchase costs A means to receive the content information which shows the content of purchase of a manufacture (S101), A presumed means to compute presumed purchase costs based on this content information and calculation information (S102), It has a means (S104) to transmit content information to said costs proposal exchange equipment. Said costs proposal exchange equipment (20) A means to require the input of proposal costs based on the received content information (S202), A means (S203) to receive the input of proposal costs, and the received proposal costs It is the costs decision support system characterized by having a means (S204) to transmit to said costs decision exchange equipment (10), and equipping said costs decision exchange equipment (10) with a comparison means (S106) to compare the proposal costs which received, and presumed purchase costs further.
[Claim 2] For said presumed means, said content information is a costs decision support system according to claim 1 characterized by what is made that presumed purchase costs should be computed (S102) including the specification information on the components which constitute a manufacture including the multiplier and intercept which use said calculation information for a multiple-regression type by substituting specification information for the multiple-regression type based on calculation information.
[Claim 3] Said costs decision exchange equipment (10) is a costs decision support system according to claim 1 or 2 characterized by having a means (S103) to add the computed presumed purchase costs to the content information which should be transmitted.
[Claim 4] Said costs decision exchange equipment (10) is based on the proposal costs which received, and is a database (101). Costs decision support system according to claim 1 to 3 characterized by having a means (S108) to update.
[Claim 5] Said comparison means (S106) is a costs decision support system according to claim 1 to 4 characterized by having made that the ratio of proposal costs and presumed purchase costs should be calculated.
[Claim 6] In the costs decision exchange equipment (10) which performs a communication link with other equipments and supports the decision of the purchase costs of a manufacture database (101) which records the calculation information used for calculation of purchase costs A means to receive the content information which shows the content of purchase of the manufacture which should be purchased (S101), A means to compute presumed purchase costs based on this content information and calculation information (S102), Costs decision exchange

equipment characterized by having a means (S104) to transmit content information to other equipments, and a means [costs / these proposal costs and / presumed purchase / when the proposal costs corresponding to the content information which transmitted are received] (S106) (10).
[Claim 7] In the record medium (30) which has recorded the program which makes a computer (10) equipped with the means of communications (15) which communicates with other equipments support the decision of the purchase costs of a manufacture and in which reading by the computer is possible program code means (PG1) made to access the database which records the calculation information used for calculation of purchase costs on a computer a program code means (PG2) to make the input of the content information which shows the content of purchase of the manufacture which should be purchased to a computer require a program code means (PG3) to make a computer compute presumed purchase costs based on the content information and calculation information that it was inputted a program code means (PG4) to make content information transmit to a computer to other equipments When the proposal costs corresponding to the content information transmitted to the computer are received A program code means to make these proposal costs and presumed purchase costs compare (PG5) Record medium, in which reading by the computer characterized by having recorded the included computer program is possible (30).

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention] The costs decision support system equipped with the costs decision exchange equipment with which this invention supports the decision of the purchase costs of a manufacture, and the costs proposal exchange equipment which supports the proposal of the purchase costs of the manufacture which has decision supported with this costs decision exchange equipment, It is related with the costs decision support system which supports the decision of suitable purchase costs especially using a statistical method, costs decision exchange equipment, and a record medium about the record medium with which the program for realizing the equipment is recorded on the costs decision exchange equipment used for the system, and a list.
[0002]
[Description of the Prior Art] An order business object places an order for various kinds of manufactures containing components with an external award business object, and when purchasing the ordered manufacture from an award business object, an order business object connects the contents, such as the drawing of the manufacture which should be purchased, and the specification of a manufacture, to an award business object with mailing or hand delivery at the time of a business talk, and calculates the estimated costs which should propose based on the connected drawing and the content with an award business object.

[0003] And to an order business object, it estimates with mailing or hand delivery from an award business object, and costs are connected, and with an order business object, it estimates, if a person in charge assesses costs, having been connected judges whether it is proper and it judges that a person in charge is proper, it will estimate, and the manufacture concerned is purchased based on costs.
[0004]
[Problem(s) to be Solved by the Invention] However, by the conventional approach, since transfer of various data is performed by mailing or hand delivery, activity manday is inefficient-like [it is large and], and there is a problem of moreover taking time amount.
[0005] In order that a person in charge may furthermore assess by subjective decision based on an experience, it does not necessarily restrict being assessed based on proper fixed criteria, but there is a problem that individual difference and dispersion may arise in an allowance result.
[0006] Moreover, a difference arises to estimated costs sensitive to the commercial scene which could not follow in footsteps of change of a commercial scene with a sufficient precision, therefore the award business object proposed, and the estimated costs which the person in charge of an order business object makes the criteria of decision, and the allowance based on an experience has the problem that a suitable judgment cannot necessarily be made.
[0007] And various problems which the decision based on these subjective criteria brings about have the problem that it is connected disadvantageously [on management] as a result.
[0008] This invention is made in view of this situation. With an order business object and an award business object By managing costs decision exchange equipment and costs proposal exchange equipment, respectively, connecting these equipments in a communication network, and considering transfer of various data as transmission and reception of the electronic intelligence through a communication network Offer of the record medium with which the program for realizing the costs decision exchange equipment used for the costs decision support system which can perform increase in efficiency of an activity and compaction of required time amount, and its system, and its equipment is recorded is set as the main object.
[0009] The allowance based on objective decision is possible by accumulating the relation between the specification of a manufacture still more nearly required for calculation of costs, and costs as a database, and updating periodically the information for costs calculation further recorded on the database to the newest information. And offer of the costs decision support system which prevents that follow in footsteps of change of a commercial scene with a sufficient precision, and the disadvantageous profit on management arises by this is set as other objects.
[0010]
[Means for Solving the Problem] The costs decision exchange equipment with which the costs decision support system concerning the 1st invention supports the decision of the purchase costs of a manufacture, In the costs decision support system equipped with the costs proposal exchange equipment which supports the proposal of the purchase costs of the manufacture which has decision supported with this costs decision exchange equipment and said costs decision exchange equipment The database which records the calculation information used for calculation of purchase costs, and a means to receive the content information which shows the content of purchase of a manufacture, It has a presumed means to compute presumed purchase costs based on this content information and calculation information, and a means to transmit content information to said costs proposal exchange equipment. Said costs proposal exchange equipment A means to require the input of proposal costs based on the received content information, and a means to receive the input of proposal costs, It is characterized by having a means to transmit the received proposal costs to said costs decision exchange equipment, and equipping said costs decision exchange equipment with a comparison means to compare the proposal costs which received, and presumed purchase costs further.
[0011] The costs proposal exchange equipment which the costs decision exchange equipment and the award business object which an order business object manages manage in the costs decision support system concerning the 1st invention By performing transfer of various information, such as proposal costs based on the content information which connects in a communication network and shows the content of purchase of the manufacture which should be

purchased, and this content information, by transmission and reception of the information through a communication network It is possible to mitigate the activity of the mailing activity of various data etc., and since time amount required for transfer of the time amount which the time amount and hand delivery which mailing takes take can be shortened substantially, it is possible to realize increase in efficiency of an activity and compaction of required time amount.
[0012] Compute and by comparing the proposal costs proposed as the presumed purchase costs which furthermore computed presumed purchase costs based on content information with an order business object Since the presumed purchase costs based on the information on past can be compared with the proposal costs which an award business object shows objective It is possible to avoid that can perform the allowance based on the proper fixed criteria which eliminated subjective decision of an experience of a person-in-charge individual etc., control the danger that individual difference and dispersion will arise in an allowance result for this reason, and the disadvantageous profit on management arises.
[0013] Said content information is characterized by to have made said presumed means that presumed purchase costs should be computed by substituting specification information for the multiple-regression type based on calculation information including the specification information on the components which constitute a manufacture including the multiplier and the intercept with which said calculation information uses the costs decision support system concerning the 2nd invention for a multiple-regression type in the 1st invention.
[0014] It is possible to compute the high presumed purchase costs of precision from a statistical standpoint by using the presumed means which used the multiple regression analysis in the costs decision support system concerning the 2nd invention.
[0015] The costs decision support system concerning the 3rd invention is characterized by equipping said costs decision exchange equipment with a means to add the computed presumed purchase costs to the content information which should be transmitted in the 1st invention or the 2nd invention.
[0016] It is possible to avoid to urge the proposal of suitable costs from an order business object to an award business object, and to receive the disadvantageous profit on management from costs decision exchange equipment in the costs decision support system concerning the 3rd invention, by transmitting the content information which added presumed purchase costs to costs proposal exchange equipment.
[0017] The costs decision support system concerning the 4th invention is characterized by equipping said costs decision exchange equipment with a means to update a database, based on the proposal costs which received in either the 1st invention thru/or the 3rd invention.
[0018] Since presumed purchase costs are computable based on the new information updated by updating the information recorded on the database in the costs decision support system concerning the 4th invention based on various information, such as proposal costs which received, it is possible to compute the presumed purchase costs which followed in footsteps of change of a commercial scene with a sufficient precision.
[0019] The costs decision support system concerning the 5th invention is characterized by having made said comparison means that the ratio of proposal costs and presumed purchase costs should be calculated in either the 1st invention thru/or the 4th invention.
[0020] By showing the ratio of proposal costs and presumed purchase costs with the costs decision support system concerning the 5th invention, it is possible to carry out an objective and quantitive comparison in an order business object, and it is possible to advance bargaining to dominance by showing an award business object a comparison result.
[0021] In the costs decision exchange equipment which the costs decision exchange equipment concerning the 6th invention performs a communication link with other equipments, and supports the decision of the purchase costs of a manufacture The database which records the calculation information used for calculation of purchase costs, and a means to receive the content information which shows the content of purchase of the manufacture which should be purchased, It is characterized by having a means to compute presumed purchase costs based on this content information and calculation information, a means to transmit content information to other equipments, and a means [costs / these proposal costs and / presumed purchase / when

the proposal costs corresponding to the transmitted content information are received].
[0022] With the costs decision exchange equipment concerning the 6th invention, it connects with the costs proposal exchange equipment which an award business object manages in a communication network. By performing transfer of various information, such as proposal costs based on the content information which shows the content of the manufacture which should be purchased, and this content information, by transmission and reception of the information through a communication network It is possible to mitigate the activity of the mailing activity of various data etc., and since time amount required for transfer of the time amount which the time amount and hand delivery which mailing takes take can be shortened substantially, it is possible to realize increase in efficiency of an activity and compaction of required time amount.
[0023] Compute and by comparing the proposal costs proposed as the presumed purchase costs which furthermore computed presumed purchase costs based on content information with an order business object Since the presumed purchase costs based on the information on past can be compared with the proposal costs which an award business object shows objective It is possible to avoid that can perform the allowance based on the proper fixed criteria which eliminated subjective decision of an experience of a person-in-charge individual etc., control the danger that individual difference and dispersion will arise in an allowance result for this reason, and the disadvantageous profit on management arises.
[0024] The record medium in which reading by the computer concerning the 7th invention is possible In the record medium which has recorded the program which makes a computer equipped with the means of communications which communicates with other equipments support the decision of the purchase costs of a manufacture and in which reading by the computer is possible The program code means made to access the database which records the calculation information used for calculation of purchase costs on a computer, A program code means to make the input of the content information which shows the content of purchase of the manufacture which should be purchased to a computer require, A program code means to make a computer compute presumed purchase costs based on the content information and calculation information that it was inputted, A program code means to make content information transmit to a computer to other equipments, When the proposal costs corresponding to the content information transmitted to the computer are received, it is characterized by having recorded the computer program including a program code means to make these proposal costs and presumed purchase costs compare.
[0025] In the record medium in which reading by the computer concerning the 7th invention is possible By performing by computer equipped with the means of communications which communicates with other equipments the program currently recorded It connects with the costs proposal exchange equipment which an award business object manages in a communication network. Since transmission and reception of the information through a communication network can perform transfer of various information, such as proposal costs based on the content information which shows the content of the manufacture which should be purchased, and this content information It is possible to mitigate the activity of the mailing activity of various data etc., and since time amount required for transfer of the time amount which the time amount and hand delivery which mailing takes take can be shortened substantially, it is possible to realize increase in efficiency of an activity and compaction of required time amount.
[0026] Compute and by comparing the proposal costs proposed as the presumed purchase costs which furthermore computed presumed purchase costs based on content information with an order business object Since the presumed purchase costs based on the information on past can be compared with the proposal costs which an award business object shows objective It is possible to avoid that can perform the allowance based on the proper fixed criteria which eliminated subjective decision of an experience of a person-in-charge individual etc., control the danger that individual difference and dispersion will arise in an allowance result for this reason, and the disadvantageous profit on management arises.
[0027]
[Embodiment of the Invention] Hereafter, this invention is explained in full detail based on the drawing in which the gestalt of the operation is shown. Drawing 1 is the explanatory view showing

the concept of the costs decision support system of this invention, and drawing 2 is the block diagram showing the configuration of the costs decision support system of this invention. 100 in drawing is an order business object which places an order that manufactures, such as a machine part and various engines, should be purchased, and the business object of the exterior where the order business object 100 serves as an order place which places an order for a manufacture is the award business object 200.

[0028] The order business object 100 has managed the costs decision exchange equipment 10 using the computer (server computer) used for the decision of the purchase costs which purchase a manufacture when ordering a manufacture, and the award business object 200 has managed the costs proposal exchange equipment 20 used for the proposal of the purchase costs of the manufacture which received the order. And it connects with the communication networks 300, such as the Internet, and costs decision exchange equipment 10 and costs proposal exchange equipment 20 transmit and receive various information.

[0029] Costs decision exchange equipment 10 is equipped with the record means 13, such as a hard disk which records the information on the program read in the record media 30, such as CD-ROM which recorded the information on the program for the costs decision exchange equipments of this invention, data, etc., by the secondary memory means 12, such as a CD-ROM drive which reads the information on a program, data, etc., and the list with the secondary memory means 12, data, etc.

[0030] And a computer operates as costs decision exchange equipment 10 of this invention by reading the information on a program, data, etc. in the record means 13, memorizing to RAM14 which memorizes information, and performing by CPU11.

[0031] In addition, the program of the calculation information record program code PG 1, the content information input request program code PG 2, the presumed purchase costs calculation program code PG 3, the content information transmitting program code PG 4, proposal costs, and presumed purchase costs comparison program code PG5 grade is included in the program recorded on the record medium 30 of this invention operated as costs decision exchange equipment 10 of this invention.

[0032] Moreover, a part of record section of the record means 13 is used as a database 101 which records the calculation information which shows the statistics processing result on the content information list which shows the contents, such as a drawing of a manufacture, and the specification.

[0033] Furthermore, costs decision exchange equipment 10 equips the input means 16, such as the means of communications 15 which performs a communication link with costs proposal exchange equipment 20, a keyboard, and a mouse, and a list with the output means 17, such as a monitor and a printer, through the communication network 300.

[0034] Drawing 3 and drawing 4 are the explanatory views showing notionally the content of record of the database 101 with which the costs decision exchange equipment 10 of this invention is equipped. The content information which shows the content of the manufacture currently recorded on the database 101 is recorded on date items, such as a decision stage of costs items, such as table-of-contents items, such as a lot number, construction material, and an award business object, purchase costs, calculation costs and purchase costs / calculation costs ratio, and purchase costs, and a list as a record for every manufacture which has data, respectively in specification items, such as the number of cylinders, a bulb injection-valve opening pressure, and a valve-spring load, as shown in drawing 3 . In addition, as content information currently recorded on the database 101, image data, such as a drawing of a manufacture, is also recorded besides the data as a numeric value.

[0035] The price at the time of the purchase of the manufacture concerned is shown in the item of the purchase costs in a costs item as data, and the price which computed the purchase costs consider that are proper is shown in the item of calculation costs as data.

[0036] The data shown as calculation costs are the value computed by making into an explanatory variable specification information, such as the number of cylinders shown in the specification item, a bulb injection-valve opening pressure, and a valve-spring load, performing a multiple regression analysis by making the track record value of purchase costs into the object

variable, and substituting specification information for the obtained multiple-regression type.
[0037] A percentage shows the ratio of purchase costs and calculation costs, with [the data shown as purchase costs / a calculation costs ratio] 100 [or more], they show that it purchased at a price higher than the purchase costs consider that are proper, and with [data] 100 [less than], they show that it purchased at a price cheaper than the purchase costs consider that are proper.
[0038] As shown in drawing 4 , the calculation information which shows the statistics processing result of the manufacture currently recorded on the database 101 is data obtained by statistics processing, and is recorded as data shown in tables, such as recursion statistics, the analysis of variance table, and a multiple-regression-analysis table that includes the information on a multiplier, an intercept, etc. in a list. Each of such calculation information is data obtained by making specification information into an explanatory variable and performing a multiple regression analysis by making the track record value of purchase costs into the object variable.
[0039] Costs proposal exchange equipment 20 is the almost same configuration as costs decision exchange equipment 10, and is equipped with CPU21, the record means 22, RAM23, means of communications 24, the input means 25, and the output means 26.
[0040] Next, it explains using the flow chart which shows processing of the costs decision exchange equipment 10 in the costs decision support system of this invention and costs proposal exchange equipment 20 to drawing 5 . The order person in charge who operates costs decision exchange equipment 10 first inputs into costs decision exchange equipment 10 the content information which shows the contents of purchase, such as a drawing of the manufacture which should be purchased, specification information, quantity, and the delivery date.
[0041] With costs decision exchange equipment 10, the input of content information is received (S101), the specification information included in the received content information is substituted for the multiple-regression type based on the calculation information currently recorded on the database 101, and presumed purchase costs are computed (S102). And the content information which added the computed presumed purchase costs to content information (S103), and added presumed purchase costs is transmitted to costs proposal exchange equipment 20 (S104).
[0042] With costs proposal exchange equipment 20, the message which receives content information (S201) and requires the input of proposal costs based on the received content information and this content information is outputted (S202). The estimated costs which should check the presumed purchase costs added to the outputted content information and this content information, and should propose them based on the checked content information and the presumed purchase costs and which estimated, and calculated and calculated costs carry out as proposal costs, and the award person in charge who operates costs proposal exchange equipment 20 inputs to costs proposal exchange equipment 20. With costs proposal exchange equipment 20, the input of proposal costs is received (S203) and the received proposal costs are transmitted to costs decision exchange equipment 10 (S204).
[0043] With costs decision exchange equipment 10, proposal costs are received (S105), that the proposal costs which received should be compared with presumed purchase costs, proposal costs / presumed purchase costs ratio is calculated (S106), and the calculated proposal costs / presumed purchase costs ratio, the proposal costs which received, and presumed purchase costs are outputted (S107). The content of record of a database 101 is updated by furthermore recording proposal costs, presumed purchase costs, proposal costs / presumed purchase costs ratio, and the content information about the proposal costs concerned on a database 101 as purchase costs, calculation costs and purchase costs / a calculation costs ratio, respectively (S108).
[0044] And based on the outputted proposal costs, presumed purchase costs and proposal costs / presumed purchase costs ratio, the person in charge of an order business object assesses proposal costs, and judges whether it is proper. When it is judged that proposal costs are not proper, transceiver processing of the information about costs is repeated between costs decision exchange equipment 10 and costs proposal exchange equipment 20 until it is judged that proposal costs are proper. And with costs decision exchange equipment 10, whenever it

receives the proposal costs estimated newly, the content of record of a database 101 is updated.
[0045] Moreover, statistics processing of a multiple regression analysis etc. processes for every predetermined periods of six months, one etc. year, etc., and processes in that case in the data currently recorded on the database 101 using the newest data for a predetermined period. Since updating is performed whenever it receives proposal costs, a database 101 becomes possible [that this follows in footsteps of change of a commercial scene with a sufficient precision].
[0046] You may make it output the graph which it not only outputs as a numeric value, but created and created the suitable graph based on the information currently recorded on the database 101 as a gestalt which furthermore outputs proposal costs, presumed purchase costs and proposal costs / presumed purchase costs ratio.
[0047] By taking a date especially along an axis of abscissa, taking proposal costs, presumed purchase costs and proposal costs / presumed purchase costs ratio along an axis of ordinate, and creating the graph which shows the aging, it can use for analysis of a commercial-scene trend, and it becomes possible to avoid that the disadvantageous profit on management arises further.
[0048] In addition, although the sign for setting that it is convenient as an object with a drawing is indicated in the term of an application for patent, this invention is not limited to structure with an accompanying drawing by this publication.
[0049]
[Effect of the Invention] In the costs decision support system applied to this invention as explained in full detail above, costs decision exchange equipment, and a record medium The costs proposal exchange equipment which the costs decision exchange equipment and the award business object which an order business object manages manage By performing transfer of various information, such as proposal costs based on the content information which connects in a communication network and shows the content of purchase of the manufacture which should be purchased, and this content information, by transmission and reception of the information through a communication network it is possible to mitigate the activity of the mailing activity of various data etc., and since time amount required for transfer of the time amount which the time amount and hand delivery which mailing takes take can be shortened substantially, it is possible to realize increase in efficiency of an activity and compaction of required time amount -- etc. -- the outstanding effectiveness is done so.
[0050] Compute and by comparing the proposal costs proposed as the presumed purchase costs which furthermore computed presumed purchase costs by this invention based on content information with an order business object Since the presumed purchase costs based on the information on past can be compared with the proposal costs which an award business object shows objective it is possible to avoid that can perform the allowance based on the proper fixed criteria which eliminated subjective decision of an experience of a person-in-charge individual etc., control the danger that individual difference and dispersion will arise in an allowance result for this reason, and the disadvantageous profit on management arises -- etc. -- the outstanding effectiveness is done so.
[0051] moreover, it is possible to compute the high presumed purchase costs of precision from a statistical standpoint by making specification information on a manufacture into an explanatory variable, and computing presumed purchase costs in this invention, based on the result of the multiple regression analysis which computed the track record value of purchase costs as an object variable -- etc. -- the outstanding effectiveness is done so.
[0052] and possible [in avoiding wearing the disadvantageous profit on management] for an order business object, since the prices of the purchase costs as which an award business object tends to determine the content information which added presumed purchase costs leading by transmitting to costs proposal exchange equipment can guide from costs decision exchange equipment to the suitable price based on statistics processing in this invention -- etc. -- the outstanding effectiveness does so.
[0053] since presumed purchase costs are computable based on the newest information updated by updating the information recorded on the database based on various information, such as

proposal costs which received in costs decision exchange equipment in this invention, it is still more possible to compute the presumed purchase costs which followed in footsteps of change of a commercial scene with a sufficient precision -- etc. -- the outstanding effectiveness does so.

[Translation done.]

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] It is the explanatory view showing the concept of the costs decision support system of this invention.
[Drawing 2] It is the block diagram showing the configuration of the costs decision support system of this invention.
[Drawing 3] It is the explanatory view showing notionally the content of record of the database with which the costs decision exchange equipment of this invention is equipped.
[Drawing 4] It is the explanatory view showing notionally the content of record of the database with which the costs decision exchange equipment of this invention is equipped.
[Drawing 5] It is the flow chart which shows processing of the costs decision exchange equipment in the costs decision support system of this invention and costs proposal exchange equipment.
[Description of Notations]
10 Costs Decision Exchange Equipment
20 Costs Proposal Exchange Equipment
30 Record Medium
100 Order Business Object
101 Database
200 Award Business Object
300 Communication Network

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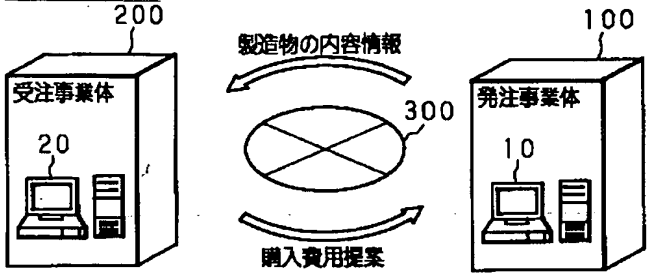
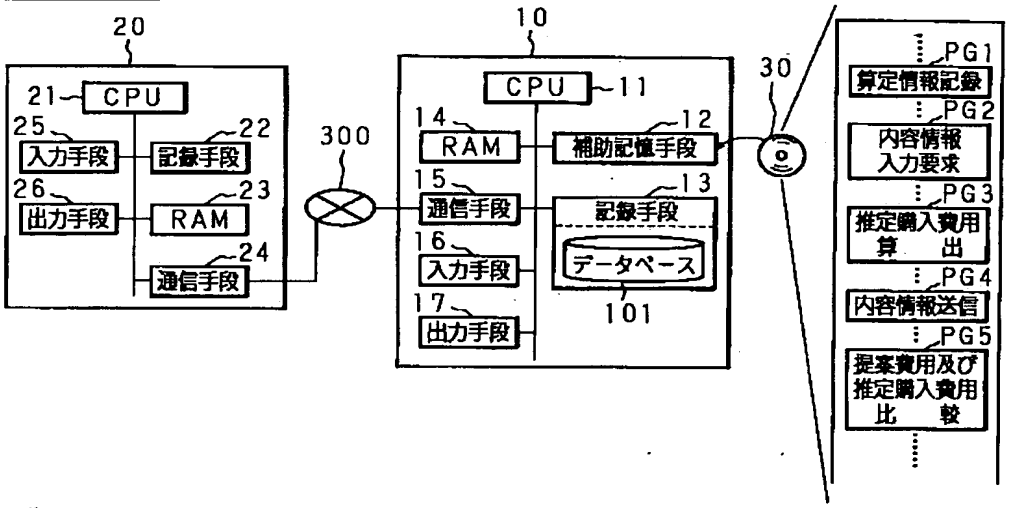
DRAWINGS

[Drawing 1]



[Drawing 2]



[Drawing 3]

品番	材質	受注事業体	購入費用	算出費用	購入費用/算出費用比(%)	決定時期	気筒数	バルブ開弁圧	バルブスプリング荷重
1T119	アルミ	A社	6,424	6,114	105	'99/05/30	1	26	1.61
1T129	アルミ	A社	5,200	5,084	102	'98/11/09	1	29	1.61
16029	アルミ	B社	7,389	8,079	91	'98/05/21	3	15	1.10
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮

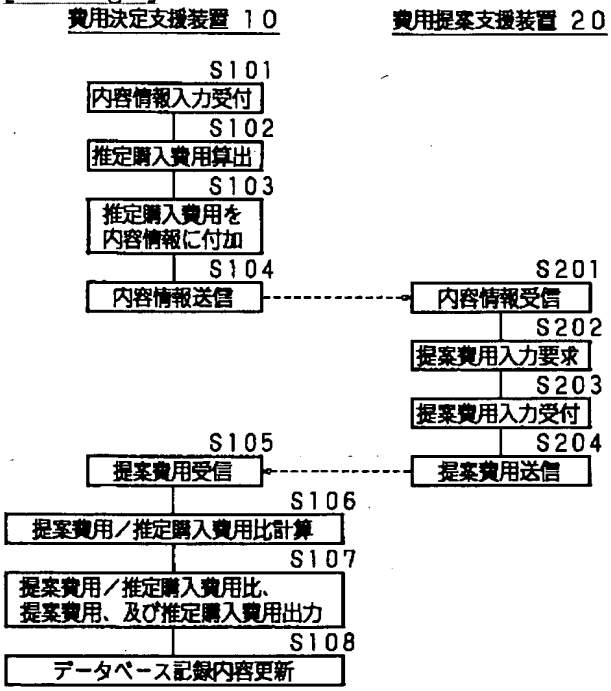
[Drawing 4]

回帰統計表	
重相関R	0.921
重決定R^2	0.848
補正R^2	0.821
標準誤差	1129.3
観測数	21

分散分析表					
	自由度	変動	分散	観測された分散比	有意F
回帰	3	1.21E+08	4.04E+07	31.7	3.47E-07
残差	17	2.17E+07	1.28E+06		
合計	20	1.43E+08			

重回帰分析表						
	係数	標準誤差	t値	P値	下限95%	上限95%
切片	-3399.3	1738.9	-1.955	0.0672	-7068.1	269.38
説明変数1	-0.0081	0.0103	-0.779	0.4469	-0.0298	0.0138
説明変数2	2973.0	331.68	8.9634	7.51E-08	2273.2	3672.7
説明変数3	128.34	34.276	3.7442	0.0016	56.023	200.66

[Drawing 5]



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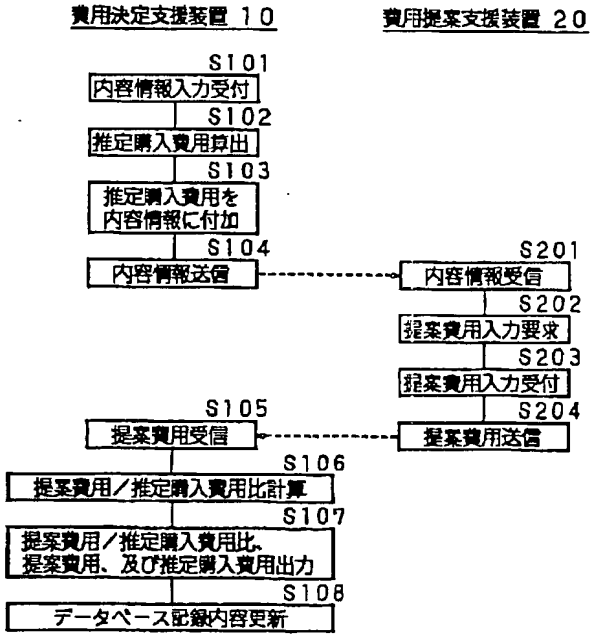
(54)【発明の名称】費用決定支援システム、費用決定支援装置、及び記録媒体

(57)【要約】
【課題】 製造物を購入すべく発注を行う発注事業体と、発注を受ける受注事業体において、各種資料の授受作業の効率化及び時間の短縮を行い、しかも受注事業体が提案した製造物の購入費用に対し、発注事業体側が客観的な査定を行うことを支援する費用決定支援システム、費用決定支援装置、及び記録媒体を提供する。
【解決手段】 費用決定支援装置１０では、内容情報の入力を受け付け（Ｓ１０１）、受け付けた内容情報に基づいて推定購入費用を算出し（Ｓ１０２）、また内容情報を費用提案支援装置２０へ送信する（Ｓ１０４）。費用提案支援装置２０では、受信した内容情報に基づく提案費用の入力を要求し（Ｓ２０２）、受け付けた提案費用を、費用決定支援装置１０へ送信する（Ｓ２０４）。費用決定支援装置１０では、受信した提案費用を推定購入費用と比較するための計算を行う（Ｓ１０６）。



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【特許請求の範囲】

【請求項１】 製造物の購入費用の決定を支援する費用決定支援装置(10)、及び該費用決定支援装置(10)で決定を支援される製造物の購入費用の提案を支援する費用提案支援装置(20)を備えた費用決定支援システムにおいて、

前記費用決定支援装置(10)は、

購入費用の算定に用いる算定情報を記録するデータベース(101) と、

製造物の購入内容を示す内容情報を受け付ける手段(S101)と、

該内容情報及び算定情報に基づいて推定購入費用を算出する推定手段(S102)と、

内容情報を、前記費用提案支援装置へ送信する手段(S104)とを備え、

前記費用提案支援装置(20)は、

受信した内容情報に基づく提案費用の入力を要求する手段(S202)と、

提案費用の入力を受け付ける手段(S203)と、

受け付けた提案費用を、前記費用決定支援装置(10)へ送信する手段(S204)とを備え、

前記費用決定支援装置(10)は、更に、受信した提案費用、及び推定購入費用を比較する比較手段(S106)を備えることを特徴とする費用決定支援システム。

【請求項２】 前記算定情報は、重回帰式に用いる係数及び切片を含み、

前記内容情報は、製造物を構成する部品の仕様情報を含み、

前記推定手段は、算定情報に基づく重回帰式に、仕様情報を代入することにより、推定購入費用を算出すべくなしてある(S102)ことを特徴とする請求項１に記載の費用決定支援システム。

【請求項３】 前記費用決定支援装置(10)は、送信すべき内容情報に、算出した推定購入費用を付加する手段(S103)を備えることを特徴とする請求項１又は請求項２に記載の費用決定支援システム。

【請求項４】 前記費用決定支援装置(10)は、受信した提案費用に基づいて、データベース(101) を更新する手段(S108)を備えることを特徴とする請求項１乃至請求項３のいずれかに記載の費用決定支援システム。

【請求項５】 前記比較手段(S106)は、提案費用及び推定購入費用の比を計算すべくなしてあることを特徴とする請求項１乃至請求項４のいずれかに記載の費用決定支援システム。

【請求項６】 他の装置と通信を行い、製造物の購入費用の決定を支援する費用決定支援装置(10)において、

購入費用の算定に用いる算定情報を記録するデータベース(101) と、

購入すべき製造物の購入内容を示す内容情報を受け付ける手段(S101)と、

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該内容情報及び算定情報に基づいて推定購入費用を算出する手段(S102)と、

内容情報を、他の装置へ送信する手段(S104)と、

送信した内容情報に対応する提案費用を受信した場合に、該提案費用及び推定購入費用を比較する手段(S106)とを備えることを特徴とする費用決定支援装置(10)。

【請求項７】 他の装置と通信する通信手段(15)を備えるコンピュータ(10)に、製造物の購入費用の決定を支援させるプログラムを記録してある、コンピュータでの読み取りが可能な記録媒体(30)において、

コンピュータに、購入費用の算定に用いる算定情報を記録するデータベースにアクセスさせるプログラムコード手段(PG1) と、

コンピュータに、購入すべき製造物の購入内容を示す内容情報の入力を要求させるプログラムコード手段(PG2)と、

コンピュータに、入力された内容情報及び算定情報に基づいて推定購入費用を算出させるプログラムコード手段(PG3) と、

コンピュータに、内容情報を、他の装置へ送信させるプログラムコード手段(PG4) と、

コンピュータに、送信した内容情報に対応する提案費用を受信した場合に、該提案費用及び推定購入費用を比較させるプログラムコード手段(PG5) とを含むコンピュータプログラムを記録してあることを特徴とするコンピュータでの読み取りが可能な記録媒体(30)。

【発明の詳細な説明】

【０００１】

【発明の属する技術分野】本発明は製造物の購入費用の決定を支援する費用決定支援装置、及び該費用決定支援装置で決定を支援される製造物の購入費用の提案を支援する費用提案支援装置を備えた費用決定支援システム、そのシステムに用いられる費用決定支援装置、並びにその装置を実現するためのプログラムが記録されている記録媒体に関し、特に統計的手法を用いて適切な購入費用の決定を支援する費用決定支援システム、費用決定支援装置、及び記録媒体に関する。

【０００２】

【従来の技術】部品を含む各種の製造物を、発注事業体が外部の受注事業体へ発注し、発注した製造物を受注事業体から購入する場合、発注事業体は、購入すべき製造物の図面及び製造物の仕様等の内容を、郵送又は商談時の手渡しにより受注事業体へ連絡し、受注事業体では、連絡された図面及び内容に基づいて提案すべき見積もり費用を算定する。

【０００３】そして受注事業体から発注事業体へ、郵送又は手渡しにより見積もり費用を連絡し、発注事業体では連絡された見積もり費用を担当者が査定して、適正か否かの判断を行い、担当者が適正であると判断すれば見積もり費用に基づいて当該製造物を購入する。

【０００４】

【発明が解決しようとする課題】しかしながら従来の方法では、郵送又は手渡しにより、各種資料の授受が行われるため、作業工数が大きく非効率的であり、しかも時間がかかるという問題がある。

【０００５】さらに担当者が経験に基づく主観的な判断により査定を行うため、必ずしも適正な一定の基準に基づいて査定されるとは限らず、査定結果に個人差及びばらつきが生じかねないという問題がある。

【０００６】また経験に基づく査定は、市場の変化に精度よく追随することができず、そのため受注事業体が提案した市場に敏感な見積もり費用と、発注事業体の担当者が判断の基準とする見積もり費用とに差異が生じ、必ずしも適切な判断が下せるとは限らないという問題がある。

【０００７】そしてこれらの主観的な基準に基づく判断がもたらす様々な問題は、結果として経営上の不利益につながるという問題がある。

【０００８】本発明は斯かる事情に鑑みてなされたものであり、発注事業体及び受注事業体にて、費用決定支援装置及び費用提案支援装置を夫々管理し、これらの装置を通信ネットワークにて接続し、各種資料の授受を、通信ネットワークを介した電子情報の送受信とすることにより、作業の効率化及び必要な時間の短縮を行うことが可能な費用決定支援システム、そのシステムに用いられる費用決定支援装置、及びその装置を実現するためのプログラムが記録されている記録媒体の提供を主たる目的とする。

【０００９】さらに費用の算定に必要な製造物の仕様と費用との関係をデータベースとして蓄積し、更にそのデータベースに記録された費用算定用の情報を定期的に最新の情報に更新することにより、客観的な判断に基づく査定が可能で、しかも市場の変化に精度よく追随し、またこれにより経営上の不利益が生じることを防止する費用決定支援システム等の提供を他の目的とする。

【００１０】

【課題を解決するための手段】第１発明に係る費用決定支援システムは、製造物の購入費用の決定を支援する費用決定支援装置、及び該費用決定支援装置で決定を支援される製造物の購入費用の提案を支援する費用提案支援装置を備えた費用決定支援システムにおいて、前記費用決定支援装置は、購入費用の算定に用いる算定情報を記録するデータベースと、製造物の購入内容を示す内容情報を受け付ける手段と、該内容情報及び算定情報に基づいて推定購入費用を算出する推定手段と、内容情報を、前記費用提案支援装置へ送信する手段とを備え、前記費用提案支援装置は、受信した内容情報に基づく提案費用の入力を要求する手段と、提案費用の入力を受け付ける手段と、受け付けた提案費用を、前記費用決定支援装置へ送信する手段とを備え、前記費用決定支援装置は、更

に、受信した提案費用、及び推定購入費用を比較する比較手段を備えることを特徴とする。

【００１１】第１発明に係る費用決定支援システムでは、発注事業体が管理する費用決定支援装置及び受注事業体が管理する費用提案支援装置を、通信ネットワークで接続し、購入すべき製造物の購入内容を示す内容情報、及び該内容情報に基づく提案費用等の各種情報の授受を、通信ネットワークを介した情報の送受信により行うことにより、各種資料の郵送作業等の作業を軽減することが可能であり、また郵送に要する時間及び手渡しに要する時間等の授受に必要な時間を大幅に短縮することができるので、作業の効率化及び必要な時間の短縮を実現することが可能である。

【００１２】さらに内容情報に基づいて推定購入費用を算出し、算出した推定購入費用と提案された提案費用とを比較することにより、発注事業体では、過去の情報に基づく推定購入費用と、受注事業体が示す提案費用とを客観的に比較することができるので、担当者個人の経験等の主観的な判断を排除した適正な一定の基準に基づく査定が行え、このため査定結果に個人差及びばらつきが生じる危険性を抑制し、経営上の不利益が生じることを回避することが可能である。

【００１３】第２発明に係る費用決定支援システムは、第１発明において、前記算定情報は、重回帰式に用いる係数及び切片を含み、前記内容情報は、製造物を構成する部品の仕様情報を含み、前記推定手段は、算定情報に基づく重回帰式に、仕様情報を代入することにより、推定購入費用を算出すべくなしてあることを特徴とする。

【００１４】第２発明に係る費用決定支援システムでは、重回帰分析を用いた推定手段を用いることにより、統計的な見地から精度の高い推定購入費用を算出することが可能である。

【００１５】第３発明に係る費用決定支援システムは、第１発明又は第２発明において、前記費用決定支援装置は、送信すべき内容情報に、算出した推定購入費用を付加する手段を備えることを特徴とする。

【００１６】第３発明に係る費用決定支援システムでは、費用決定支援装置から、推定購入費用を付加した内容情報を、費用提案支援装置へ送信することにより、発注事業体から受注事業体へ、適切な費用の提案を促し、経営上の不利益を被ることを回避することが可能である。

【００１７】第４発明に係る費用決定支援システムは、第１発明乃至第３発明のいずれかにおいて、前記費用決定支援装置は、受信した提案費用に基づいて、データベースを更新する手段を備えることを特徴とする。

【００１８】第４発明に係る費用決定支援システムでは、受信した提案費用等の各種情報に基づいて、データベースに記録された情報を更新することにより、更新された新しい情報に基づいて推定購入費用を算出すること

ができるので、市場の変化に精度よく追随した推定購入費用を算出することが可能である。

【００１９】第５発明に係る費用決定支援システムは、第１発明乃至第４発明のいずれかにおいて、前記比較手段は、提案費用及び推定購入費用の比を計算すべくなしてあることを特徴とする。

【００２０】第５発明に係る費用決定支援システムでは、提案費用及び推定購入費用の比を示すことにより、発注事業体において、客観的で定量的な比較をすることが可能であり、また受注事業体に比較結果を提示することで、交渉を優位に進めることが可能である。

【００２１】第６発明に係る費用決定支援装置は、他の装置と通信を行い、製造物の購入費用の決定を支援する費用決定支援装置において、購入費用の算定に用いる算定情報を記録するデータベースと、購入すべき製造物の購入内容を示す内容情報を受け付ける手段と、該内容情報及び算定情報に基づいて推定購入費用を算出する手段と、内容情報を、他の装置へ送信する手段と、送信した内容情報に対応する提案費用を受信した場合に、該提案費用及び推定購入費用を比較する手段とを備えることを特徴とする。

【００２２】第６発明に係る費用決定支援装置では、受注事業体が管理する費用提案支援装置に通信ネットワークで接続し、購入すべき製造物の内容を示す内容情報、及び該内容情報に基づく提案費用等の各種情報の授受を、通信ネットワークを介した情報の送受信により行うことにより、各種資料の郵送作業等の作業を軽減することが可能であり、また郵送に要する時間及び手渡しに要する時間等の授受に必要な時間を大幅に短縮することができるので、作業の効率化及び必要な時間の短縮を実現することが可能である。

【００２３】さらに内容情報に基づいて推定購入費用を算出し、算出した推定購入費用と提案された提案費用とを比較することにより、発注事業体では、過去の情報に基づく推定購入費用と、受注事業体が示す提案費用とを客観的に比較することができるので、担当者個人の経験等の主観的な判断を排除した適正な一定の基準に基づく査定が行え、このため査定結果に個人差及びばらつきが生じる危険性を抑制し、経営上の不利益が生じることを回避することが可能である。

【００２４】第７発明に係るコンピュータでの読み取りが可能な記録媒体は、他の装置と通信する通信手段を備えるコンピュータに、製造物の購入費用の決定を支援させるプログラムを記録してある、コンピュータでの読み取りが可能な記録媒体において、コンピュータに、購入費用の算定に用いる算定情報を記録するデータベースにアクセスさせるプログラムコード手段と、コンピュータに、購入すべき製造物の購入内容を示す内容情報の入力を要求させるプログラムコード手段と、コンピュータに、入力された内容情報及び算定情報に基づいて推定購入費用を算出させるプログラムコード手段と、コンピュータに、内容情報を、他の装置へ送信させるプログラムコード手段と、コンピュータに、送信した内容情報に対応する提案費用を受信した場合に、該提案費用及び推定購入費用を比較させるプログラムコード手段とを含むコンピュータプログラムを記録してあることを特徴とする。

【００２５】第７発明に係るコンピュータでの読み取りが可能な記録媒体では、記録されているプログラムを、他の装置と通信する通信手段を備えるコンピュータにて実行することにより、受注事業体が管理する費用提案支援装置に通信ネットワークで接続し、購入すべき製造物の内容を示す内容情報、及び該内容情報に基づく提案費用等の各種情報の授受を、通信ネットワークを介した情報の送受信により行うことができるので、各種資料の郵送作業等の作業を軽減することが可能であり、また郵送に要する時間及び手渡しに要する時間等の授受に必要な時間を大幅に短縮することができるので、作業の効率化及び必要な時間の短縮を実現することが可能である。

【００２６】さらに内容情報に基づいて推定購入費用を算出し、算出した推定購入費用と提案された提案費用とを比較することにより、発注事業体では、過去の情報に基づく推定購入費用と、受注事業体が示す提案費用とを客観的に比較することができるので、担当者個人の経験等の主観的な判断を排除した適正な一定の基準に基づく査定が行え、このため査定結果に個人差及びばらつきが生じる危険性を抑制し、経営上の不利益が生じることを回避することが可能である。

【００２７】

【発明の実施の形態】以下、本発明をその実施の形態を示す図面に基づいて詳述する。図１は本発明の費用決定支援システムの概念を示す説明図であり、図２は本発明の費用決定支援システムの構成を示すブロック図である。図中１００は機械部品及び各種エンジン等の製造物を購入すべく発注を行う発注事業体であり、発注事業体１００が製造物を発注する発注先となる外部の事業体が受注事業体２００である。

【００２８】発注事業体１００は、製造物を発注する場合に、製造物を購入する購入費用の決定に用いられるコンピュータ（サーバコンピュータ）を利用した費用決定支援装置１０を管理しており、受注事業体２００は、受注した製造物の購入費用の提案に用いられる費用提案支援装置２０を管理している。そして費用決定支援装置１０及び費用提案支援装置２０は、インターネット等の通信ネットワーク３００に接続し、各種情報の送受信を行う。

【００２９】費用決定支援装置１０は、本発明の費用決定支援装置用のプログラム及びデータ等の情報を記録したＣＤ－ＲＯＭ等の記録媒体３０から、プログラム及びデータ等の情報を読み取るＣＤ－ＲＯＭドライブ等の補

助記憶手段１２、並びに補助記憶手段１２により読み取られたプログラム及びデータ等の情報を記録するハードディスク等の記録手段１３を備えている。

【００３０】そして記録手段１３からプログラム及びデータ等の情報を読み取り、情報を記憶するＲＡＭ１４に記憶してＣＰＵ１１により実行することで、コンピュータは本発明の費用決定支援装置１０として動作する。

【００３１】なお本発明の費用決定支援装置１０として動作させる本発明の記録媒体３０に記録されたプログラムには、算定情報記録プログラムコードＰＧ１、内容情報入力要求プログラムコードＰＧ２、推定購入費用算出プログラムコードＰＧ３、内容情報送信プログラムコードＰＧ４、及び提案費用及び推定購入費用比較プログラムコードＰＧ５等のプログラムが含まれている。

【００３２】また記録手段１３の記録領域の一部は、製造物の図面及び仕様等の内容を示す内容情報並びにその統計処理結果を示す算定情報を記録するデータベース１０１として用いられている。

【００３３】さらに費用決定支援装置１０は、通信ネットワーク３００を介して、費用提案支援装置２０と通信を行う通信手段１５、キーボード及びマウス等の入力手段１６、並びにモニタ及びプリンタ等の出力手段１７を備えている。

【００３４】図３及び図４は本発明の費用決定支援装置１０が備えるデータベース１０１の記録内容を概念的に示す説明図である。データベース１０１に記録されている製造物の内容を示す内容情報は、図３に示すように、品番、材質、受注事業体等の目録項目、購入費用、算出費用、及び購入費用／算出費用比等の費用項目、購入費用の決定時期等の年月日項目、並びに気筒数、バルブ開弁圧、及びバルブスプリング荷重等の仕様項目に夫々データを有する製造物毎のレコードとして記録されている。なおデータベース１０１に記録されている内容情報としては、数値としてのデータ以外にも製造物の図面等の画像データも記録されている。

【００３５】費用項目中の購入費用の項目には、当該製造物の購入時の価格がデータとして示されており、算出費用の項目には、適正とみなされる購入費用を算出した価格がデータとして示されている。

【００３６】算出費用として示されるデータは、仕様項目に示された気筒数、バルブ開弁圧、及びバルブスプリング荷重等の仕様情報を説明変数とし、購入費用の実績値を目的変数として重回帰分析を行い、得られた重回帰式に、仕様情報を代入することにより算出した値である。

【００３７】購入費用／算出費用比として示されるデータは、購入費用及び算出費用の比を百分率で示したものであり、１００以上であれば適正とみなされる購入費用より高い価格で購入したことを示し、１００未満であれば適正とみなされる購入費用より安い価格で購入したことを示している。

【００３８】データベース１０１に記録されている製造物の統計処理結果を示す算定情報は、図４に示すように、統計処理により得られたデータであり、回帰統計表、分散分析表、並びに係数及び切片等の情報を含む重回帰分析表等の表に示されるデータとして記録されている。これらの算定情報は、いずれも仕様情報を説明変数とし、購入費用の実績値を目的変数として重回帰分析を行い、得られたデータである。

【００３９】費用提案支援装置２０は、費用決定支援装置１０とほぼ同様の構成であり、ＣＰＵ２１、記録手段２２、ＲＡＭ２３、通信手段２４、入力手段２５、及び出力手段２６を備えている。

【００４０】次に本発明の費用決定支援システムにおける費用決定支援装置１０及び費用提案支援装置２０の処理を図５に示すフローチャートを用いて説明する。まず費用決定支援装置１０を操作する発注担当者は、購入すべき製造物の図面、仕様情報、数量、及び納入期日等の購入内容を示す内容情報を、費用決定支援装置１０に入力する。

【００４１】費用決定支援装置１０では、内容情報の入力を受け付け（Ｓ１０１）、受け付けた内容情報に含まれる仕様情報を、データベース１０１に記録されている算定情報に基づく重回帰式に代入し、推定購入費用を算出する（Ｓ１０２）。そして算出した推定購入費用を内容情報に付加し（Ｓ１０３）、推定購入費用を付加した内容情報を費用提案支援装置２０へ送信する（Ｓ１０４）。

【００４２】費用提案支援装置２０では、内容情報を受信し（Ｓ２０１）、受信した内容情報、及び該内容情報に基づく提案費用の入力を要求するメッセージを出力する（Ｓ２０２）。費用提案支援装置２０を操作する受注担当者は、出力された内容情報及び該内容情報に付加された推定購入費用を確認し、確認した内容情報及び推定購入費用に基づいて、提案すべき見積もり費用を算定し、算定した見積もり費用を提案費用として、費用提案支援装置２０に入力する。費用提案支援装置２０では、提案費用の入力を受け付け（Ｓ２０３）、受け付けた提案費用を、費用決定支援装置１０へ送信する（Ｓ２０４）。

【００４３】費用決定支援装置１０では、提案費用を受信し（Ｓ１０５）、受信した提案費用を推定購入費用と比較すべく、提案費用／推定購入費用比を計算し（Ｓ１０６）、計算した提案費用／推定購入費用比、受信した提案費用、及び推定購入費用を出力する（Ｓ１０７）。さらに提案費用、推定購入費用、提案費用／推定購入費用比、及び当該提案費用に関する内容情報を、データベース１０１に夫々購入費用、算出費用、及び購入費用／算出費用比として記録することにより、データベース１０１の記録内容を更新する（Ｓ１０８）。

【００４４】そして出力された提案費用、推定購入費用、及び提案費用／推定購入費用比に基づいて、発注事業体の担当者が、提案費用を査定して、適正か否かを判断する。提案費用が適正でないと判断した場合、費用決定支援装置１０及び費用提案支援装置２０の間で、提案費用が適正と判断されるまで、費用に関する情報の送受信処理を繰り返す。そして費用決定支援装置１０では、新しく見積もられた提案費用を受信する都度、データベース１０１の記録内容を更新する。

【００４５】また重回帰分析等の統計処理は、６ヶ月及び１年等の所定期間毎に処理を行い、その場合に、データベース１０１に記録されているデータの中で、最新の所定期間分のデータを用いて処理を行う。データベース１０１は提案費用を受信する都度、更新が行われているので、これにより市場の変化に精度よく追随することが可能となる。

【００４６】さらに提案費用、推定購入費用、及び提案費用／推定購入費用比を出力する形態としては、数値として出力するだけでなく、データベース１０１に記録されている情報に基づいて適当なグラフを作成し、作成したグラフを出力するようにしてもよい。

【００４７】特に横軸に年月日をとり、縦軸に提案費用、推定購入費用、及び提案費用／推定購入費用比をとって、その経時変化を示すグラフを作成することにより、市場動向の分析に用いることができ、更には経営上の不利益が生じることを回避することが可能になる。

【００４８】なお、特許請求の項に、図面との対象を便利にするための符号を記載してあるが、この記載によって本発明は添付図面との構造に限定されるものではない。

【００４９】

【発明の効果】以上詳述した如く本発明に係る費用決定支援システム、費用決定支援装置、及び記録媒体では、発注事業体が管理する費用決定支援装置及び受注事業体が管理する費用提案支援装置を、通信ネットワークで接続し、購入すべき製造物の購入内容を示す内容情報、及び該内容情報に基づく提案費用等の各種情報の授受を、通信ネットワークを介した情報の送受信により行うことにより、各種資料の郵送作業等の作業を軽減することが可能であり、また郵送に要する時間及び手渡しに要する時間等の授受に必要な時間を大幅に短縮することができるので、作業の効率化及び必要な時間の短縮を実現することが可能である等、優れた効果を奏する。

【００５０】さらに本発明では、内容情報に基づいて推定購入費用を算出し、算出した推定購入費用と提案された提案費用とを比較することにより、発注事業体では、

過去の情報に基づく推定購入費用と、受注事業体が示す提案費用とを客観的に比較することができるので、担当者個人の経験等の主観的な判断を排除した適正な一定の基準に基づく査定が行え、このため査定結果に個人差及びばらつきが生じる危険性を抑制し、経営上の不利益が生じることを回避することが可能である等、優れた効果を奏する。

【００５１】また本発明では、製造物の仕様情報を説明変数とし、購入費用の実績値を目的変数として算出した重回帰分析の結果に基づいて推定購入費用を算出することにより、統計的な見地から精度の高い推定購入費用を算出することが可能である等、優れた効果を奏する。

【００５２】そして本発明では、費用決定支援装置から、推定購入費用を付加した内容情報を、費用提案支援装置へ送信することにより、受注事業体が主導的に決定しがちな購入費用の価格を、統計処理に基づく適切な価格に誘導することができるので、発注事業体にとって経営上の不利益を被ることを回避することが可能である等、優れた効果を奏する。

【００５３】さらに本発明では、費用決定支援装置において、受信した提案費用等の各種情報に基づきデータベースに記録された情報を更新することにより、更新された最新の情報に基づいて推定購入費用を算出することができるので、市場の変化に精度よく追随した推定購入費用を算出することが可能である等、優れた効果を奏する。

【図面の簡単な説明】

【図１】本発明の費用決定支援システムの概念を示す説明図である。

【図２】本発明の費用決定支援システムの構成を示すブロック図である。

【図３】本発明の費用決定支援装置が備えるデータベースの記録内容を概念的に示す説明図である。

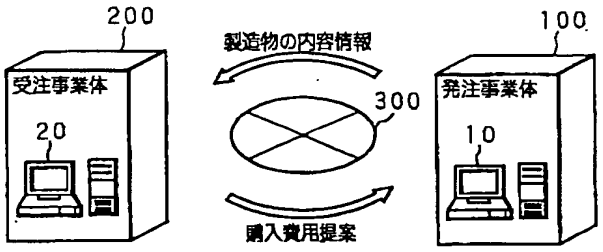
【図４】本発明の費用決定支援装置が備えるデータベースの記録内容を概念的に示す説明図である。

【図５】本発明の費用決定支援システムにおける費用決定支援装置及び費用提案支援装置の処理を示すフローチャートである。

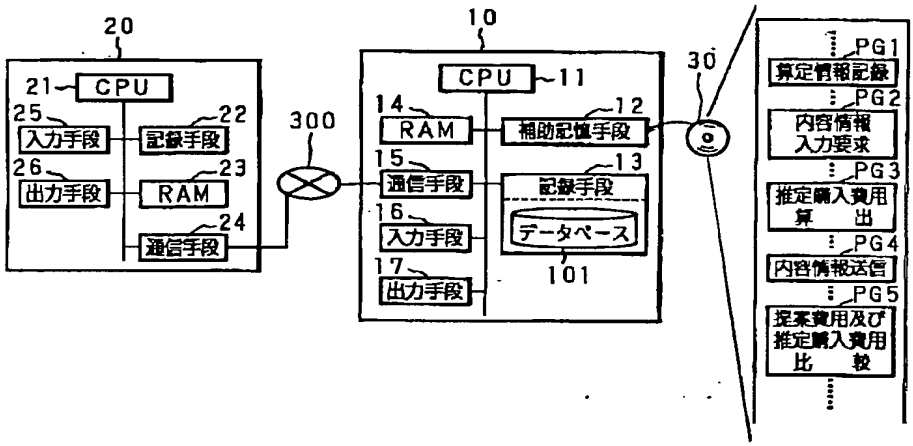
【符号の説明】

１０　費用決定支援装置
２０　費用提案支援装置
３０　記録媒体
１００　発注事業体
１０１　データベース
２００　受注事業体
３００　通信ネットワーク

【図１】



【図２】



【図３】

品番	材質	受注事業体	購入費用	算出費用	購入費用／算出費用比（％）	決定時期	気筒数	バルブ開弁圧	バルブスプリング荷重
1T119	アルミ	A社	6,424	6,114	105	'99/05/30	1	26	1.61
1T129	アルミ	A社	5,200	5,084	102	'98/11/09	1	29	1.61
16029	アルミ	B社	7,389	8,079	91	'98/05/21	3	15	1.10
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮

【図４】

回帰統計表	
重相関R	0.921
重決定R^2	0.848
補正R^2	0.821
標準誤差	1129.3
観測数	21

分散分析表					
	自由度	変動	分散	観測された分散比	有意F
回帰	3	1.21E+08	4.04E+07	31.7	3.47E-07
残差	17	2.17E+07	1.28E+06		
合計	20	1.43E+08			

重回帰分析表						
	係数	標準誤差	t値	P値	下限95%	上限95%
切片	-3399.3	1738.9	-1.955	0.0672	-7068.1	269.38
説明変数1	-0.0081	0.0103	-0.779	0.4469	-0.0298	0.0138
説明変数2	2973.0	331.68	8.9634	7.51E-08	2273.2	3672.7
説明変数3	128.34	34.276	3.7442	0.0016	56.023	200.66

【図５】